

**UNITED STATES DISTRICT COURT
DISTRICT OF MAINE**

CITY OF BANGOR,)	
)	
Plaintiff)	
)	
v.)	
)	
CITIZENS COMMUNICATIONS)	CIVIL ACTION
COMPANY,)	DOCKET NO. 02-183-B-S
)	
Defendant)	
)	
and)	
)	
STATE OF MAINE and)	
MAINE DEPARTMENT OF)	
ENVIRONMENTAL PROTECTION,)	
)	
Intervenors)	

AMENDED CONSENT DECREE

WHEREAS, on November 22, 2002, the City of Bangor (“City”) filed a Complaint against Citizens Communications Company (“Citizens”) in the United States District Court for the District of Maine (“Court”) (“Lawsuit”) under both the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. § 6972(a)(1)(B), and the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), 42 U.S.C. § 9613(f)(1), as well as various State laws claiming that the manufactured gas plant that operated in Bangor from approximately 1852 until at least 1963 (the “Bangor MGP”) was the source of the deposit of tar underlying a portion of the Penobscot River located in Bangor, Maine, known as Dunnett’s Cove (as further defined herein, the “Site”); and

WHEREAS, on December 24, 2002, Citizens filed an answer in the Lawsuit denying all of the material allegations set forth in the City's Complaint and also filed a counterclaim against the City and third party claims against a number of other parties; and

WHEREAS, the Court established a three-phase procedure for trying the issues to be litigated in the Lawsuit under which one phase would address liability as between the City and Citizens (the "Liability Phase"), a second phase would address selecting the method of clean up for the Site (the "Remedy Phase"), and a third phase would address the potential liability of additional third parties named by Citizens in the Lawsuit (the "Third-Party Phase"); and

WHEREAS, over the course of 12 days in September 2005 a trial in the Liability Phase was held before this Court; and

WHEREAS, following trial, the Court received additional documentary evidence on October 6, 2005 and then closed the evidentiary portion of the trial; and

WHEREAS, on June 27, 2006, the Court issued Findings of Fact and Conclusions of Law regarding the Liability Phase; and

WHEREAS, the Court granted the City and Citizens an opportunity to jointly suggest a remedy to the Court and thereby settle the Remedy Phase of this lawsuit; and

WHEREAS, the State of Maine is a sovereign State which owns the land underlying the Penobscot River in its sovereign capacity; and

WHEREAS, the Maine Department of Environmental Protection ("Department" or "DEP") is an agent of the State of Maine, established and existing under the authority of 38 M.R.S.A. § 341-A, which is charged with the responsibility of controlling pollution of air, water and land in Maine. Pursuant to the Maine Uncontrolled Sites Law, DEP is specifically authorized to and directed to investigate and evaluate sites where hazardous substances have

come to be located (38 M.R.S.A. § 1364(4)); to designate such sites as uncontrolled hazardous substance sites (28 M.R.S.A. § 1362(4)); and to take action to abate, clean up or mitigate the threats or hazards posed by uncontrolled hazardous substance sites (38 M.R.S.A. §§ 1364(5) & 1365); and

WHEREAS, on March 3, 2004, DEP issued an Uncontrolled Sites Designation in which the Department found that the tar deposit at the Site and/or the PAHs contained in the tar deposit in Dunnett's Cove are hazardous substances pursuant to the Maine Uncontrolled Sites Law and that the Site is an uncontrolled hazardous substance site as that term is used in the Maine Uncontrolled Sites Law and so designated the Site; and

WHEREAS, the State of Maine and the Department (collectively, the "Intervenors") have alleged that the City and Citizens are jointly and severally liable to clean up the Site; and

WHEREAS, starting in 2001, the Department has overseen a Remedial Investigation and Feasibility Study of the Site conducted by the environmental consultant, RMT, Inc. ("RMT"), under a certain Memorandum of Agreement by and between the City and the Department; and

WHEREAS, the Remedial Investigation resulted in the development of a number of reports including a Baseline Ecological Risk Assessment submitted to DEP in June of 2002 and an Ecological Risk Assessment Addendum submitted on or about March 23, 2004 which reports describe the adverse impact on benthic organisms caused by direct contact with coal tar, and a Human Health Risk Assessment Addendum (2002) that described the threats to human health posed by direct contact with tarry sediments or blebs containing tar; and

WHEREAS, in April of 2005, RMT submitted a Remedial Action Objectives Report, Penobscot River Sediment and Surface Water, City of Bangor – Bangor Landing, Maine (2005),

to DEP that included the Remedial Action Objectives (“RAOs”) that are set forth in Appendix A attached hereto; and

WHEREAS, in 2004, the City and Citizens jointly engaged the environmental consulting firm of Blasland, Bouck and Lee, Inc. (“BBL”) to develop a proposed remedy for the Site that would attain the RAOs and also address the Lawsuit; and

WHEREAS, in July of 2005 BBL submitted a Final Feasibility Study Report to DEP, that recommended several remedies for implementation at the Site and, in addition, proposed certain pre-construction studies for the Site; and

WHEREAS, on August 17, 2005, DEP, by letter, accepted the remedies proposed for the Site in the Feasibility Study Report that was submitted by BBL conditioned upon the completion of certain of the pre-construction investigations described in the Feasibility Study Report and, in addition, issued a Decision Document that identified the selected remedies (“Selected Remedies”) and contained the Department’s reasons for selecting these remedies; and

WHEREAS, the Selected Remedies contemplate filling, capping and stabilization in the “Active Zone” generally described in the Feasibility Study Report, capping of the “Active Zone Buffer Area” generally described in the Feasibility Study Report, and application of cover material as habitat enhancement in the “Inactive Zone” generally described in the Feasibility Study Report; and

WHEREAS, following consideration of the Court’s opinion of June 27, 2006 the City, Citizens and DEP renewed discussions regarding remedies for the Site, including discussions related to the use of a knee wall to retain the capping system in the Active Zone as well as the extent of stabilization that would be appropriate in the Active Zone, and the extent of capping that would be appropriate in the Active Zone, as well as the extent of cover that would be

appropriate in the Active Zone Buffer Area, and the extent of habitat enhancement cover that would be appropriate in the Inactive Zone; and

WHEREAS, the City and DEP anticipate that the matters described in the preceding paragraph, along with additional questions concerning the details of design and construction of the remedial components and final size or footprint of each area to be remediated, will be the subject of Pre-Design Studies as described in Paragraph 11 (“Pre-Design Studies”); and

WHEREAS, without the benefit of the Pre-Design Studies, DEP cannot evaluate whether any elaboration or modification of the Selected Remedies will comply with all applicable laws and attain and maintain the RAOs; and

WHEREAS, the Department is willing to consider modification of the Selected Remedies at the Site so long as the modified remedies comply with all applicable laws and requirements and assure attainment and maintenance of the RAOs, so long as the basis for modified remedies is supported by the Pre-Design Studies and other deliverables described in this Consent Decree, and proposed modified remedies have been subjected to an appropriate public participation process. The Department’s willingness to consider modifications to the Selected Remedies will not, in and of itself, constitute acceptance or approval of any such modifications, which acceptance and approval shall only occur pursuant to the procedures set forth in this Consent Decree; and

WHEREAS, in the interest of resolving all claims by DEP for past and future response costs and injunctive relief arising out of or related to the Site, in the interest of fulfilling a condition to the effectiveness of the Settlement Agreement and General Release between the City and Citizens, and in the interest of resolving with finality the Liability Phase and the

Remedy Phase of this Lawsuit, the City and Citizens (hereafter referred to, collectively, as the "Settling Parties") agree to the entry of this Consent Decree; and

WHEREAS, the Court finds, and DEP and the Settling Parties agree, that it has jurisdiction over this action; and

WHEREAS, the Intervenors and the Settling Parties, by and through their representatives, each have agreed to the entry of this Decree without any findings of law or fact and expressly waive any rights of appeal with respect to this Decree; and

WHEREAS, the Court has considered the pleadings and representations of counsel for all Parties; and

WHEREAS, the Court finds this Decree to be a full, fair and reasonable disposition of the Intervenors' claims against the City and Citizens and that this Decree addresses the environmental conditions described in the Court's June 27, 2006 opinion;

THEREFORE, IT IS HEREBY ORDERED, ADJUDGED and DECREED as follows:

I. PARTIES

1. The Parties to this Decree are:
 - A. The City;
 - B. Citizens;
 - C. DEP;
 - D. The State of Maine.
 - E. This Decree does not affect the legal rights, liabilities or obligations of any person, firm or other entity not a party to this Decree.

II. JURISDICTION AND VENUE

2. This Court has jurisdiction over the subject matter of this action and over the Parties consenting hereto pursuant to CERCLA, 42 U.S.C. § 9613(b), RCRA, 42 U.S.C. § 6972, the Maine Uncontrolled Hazardous Sites Law, 38 M.R.S.A. §§ 1365 and 1367.

3. Venue is proper in this district pursuant to CERCLA, 42 U.S.C. § 9613 and 28 U.S.C. § 1391.

III. DEFINITIONS

4. The following definitions shall apply in this Consent Decree:

A. “Approved” means approved, approved upon conditions or modified by DEP.

B. “CERCLA” shall mean the Comprehensive Environmental Response,

Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 *et seq.*

C. “Commissioner” means the Commissioner of the Maine Department of Environmental Protection.

D. “Consent Decree” or “Decree” means this consent decree, including the Remedial Action Objectives as set forth in Appendix A attached hereto. All plans, specifications, schedules or other documents submitted by the City to DEP and approved by DEP pursuant to this Consent Decree are enforceable as to the City as though they were a part of this Consent Decree.

E. “Days” mean calendar days unless otherwise specified.

F. “DEP” or “Department” means the Maine Department of Environmental Protection.

G. “Effective Date” means the date this Decree is entered by the Court following lodging and public comment.

H. “Existing Contamination” means any Hazardous Substances, pollutants, or contaminants, present or existing on, under or emanating from the Site as of the Effective Date of this Consent Decree comprising the contamination identified in the Remedial Investigation report approved by DEP on July 9, 2002.

I. “Feasibility Study” or “FS” means the July 2005 study conducted by BBL consistent with CERCLA and the NCP as well as DEP policy and guidance. The FS fully developed, screened and evaluated in detail Remedial Action alternatives to prevent, mitigate, or abate the migration or the release of hazardous substances, pollutants, or contaminants at and from the Site. The FS was presented to DEP in a Final Feasibility Study Report, Dunnett’s Cove, Bangor, Maine, and was approved by DEP on August 17, 2005 subject to certain Pre-Design Studies referenced in DEP’s approval letter.

J. “Hazardous Substance” means any material identified as a hazardous substance pursuant to CERCLA, 42 U.S.C. § 9601 or 38 M.R.S.A. § 1362(1).

K. “Interest” means the rate of interest established pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607.

L. “Intervenors” means the State of Maine and DEP.

M. “Natural Resource Damage” means physical injury to or destruction of, including the resulting loss of value of, land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources pursuant to sections 101 and 107 of CERCLA, 42 U.S.C. §§ 9601 and 9607; the Clean Water Act, 33 U.S.C. §§ 1251, 1321(f); and the Maine Uncontrolled Sites Law, 38 M.R.S.A. §§ 1361 *et seq.*

N. “Remedial Action” means the remedies developed and implemented pursuant to Paragraphs 11, 12, 13, 14 and 17 of this Decree.

O. "Remedial Action Plan" or "RAP" means the plan described in Paragraph 12 of this Decree for implementing the Remedial Action.

P. "Remedial Investigation" or "RI" means that investigation of contaminated soils, sediment, groundwater and surface water at and near the Site conducted by or on behalf of the Settling Parties consistent with CERCLA and the NCP, and DEP policy and guidance. The results of the RI were set forth in the final RI report approved by DEP on July 9, 2002.

Q. "Response and Oversight Costs" shall mean all of the State's costs incurred by the Intervenors which are recoverable under 42 U.S.C. §§ 9601 *et seq.* and 38 M.R.S.A. §§ 1361 *et seq.*, including, but not limited to, payroll costs, contractor costs, travel costs, responsible party search costs, laboratory costs, and costs related to this Consent Decree including, but not limited to, the costs of reviewing or commenting on plans, reports or other items pursuant to this Consent Decree, verifying the Remedial Action, or otherwise implementing or enforcing this Consent Decree, and interest and indirect costs incurred with respect to the Site.

R. "Settling Parties" shall mean the City of Bangor and Citizens Communications Company.

S. "Site" shall mean the tar deposit underlying Dunnett's Cove in the Penobscot River, in Bangor, Maine as identified in the Court's findings of fact issued in the Lawsuit on June 27, 2006 as well as any additional area identified in DEP's Site Designation dated March 3, 2004.

IV. NO ADMISSION OF LIABILITY; COVENANT NOT TO SUE; RESERVATION OF RIGHTS

5. No admission of liability. This Consent Decree and actions taken pursuant to this Consent Decree do not constitute, nor shall they be construed as an admission of any liability, wrongdoing, responsibility, or tortious or illegal conduct whatsoever as to any Settling Party, as

such liability is disputed and denied. This Consent Decree, its terms and provisions, as well as any discussions or other communications relating to this Consent Decree, past, present, or future, shall not be offered or received in evidence in any action or proceeding, whether legal, equitable or administrative, or utilized in any other manner whatsoever, as an admission or concession of liability, wrongdoing, responsibility or tortious or illegal conduct on the part of a Settling Party. This Consent Decree may be admitted into evidence in any legal or administrative proceeding solely for the purpose of showing any party's obligation under the terms of this Consent Decree, including, without limitation, a proceeding to enforce the terms of this Consent Decree, an action against an insurer of a party to this Consent Decree, or an action for contribution by any party to this Consent Decree.

6. A. Full Satisfaction. Except as specifically provided in this Consent Decree, Intervenors agree that the obligations assumed by the City pursuant to Section VI and the payments to be made by Citizens pursuant to Section V of this Decree represent full satisfaction of Intervenors' claims with respect to the Site and any other facilities at issue in the Lawsuit, including any claims Intervenors may have against Citizens, its parents, subsidiaries, successors and assigns, as well as their respective past, present, and future shareholders, officers, directors, employees, and agents, for any and all civil or administrative liability related to or arising from the Site or any other facilities at issue in the Lawsuit, including, but not limited to, liability under 38 M.R.S.A. §§ 1304(12), 1318-A, 1319-J, 1361 to 1371, sections 106 or 107 of CERCLA, 42 U.S.C. §§ 9606, 9607, sections 7002 or 7003 of RCRA, 42 U.S.C. §§ 6972, 6973, or other applicable State laws, including common law, for those discharges, releases, and threatened releases of Hazardous Substances, hazardous wastes, and other pollutants and contaminants at or

migrating from the Site, including any groundwater or surface water contamination that may be attributable to the Site, whenever such claims may have arisen or arise in the future.

B. Intervenors' Release from Liability and Covenant not to Sue or Take

Administrative Action Against Citizens. In consideration of the obligations assumed by the City under the terms of this Decree and the payments to be made by Citizens under the terms of this Decree, and except as specifically provided in this Decree, the Intervenors covenant not to sue or take administrative action against Citizens, and Citizens shall be released from any and all said civil or administrative liability, including, but not limited to, liability under 38 M.R.S.A. §§ 1304(12), 1318-A, 13I9-J, 1361 to 1371, sections 106 or 107 of CERCLA, 42 U.S.C. §§ 9606, 9607, §§ 7002 or 7003 of RCRA, 42 U.S.C. §§ 6972, 6973, or other applicable State laws, including common law, for those discharges, releases, and threatened releases of Hazardous Substances, hazardous wastes, and other pollutants and contaminants at or migrating from the Site, including any groundwater or surface water contamination that may be attributable to the Site, whenever such claims may have arisen or arise in the future. These releases and covenants not to sue apply to Citizens, its parents, subsidiaries, successors and assigns, as well as their respective past, present, and future shareholders, officers, directors, employees, and agents (hereinafter referred to as "Citizens"). These releases and covenants not to sue shall take effect upon Citizens' compliance with Subparagraph 10.A (Payment by Citizens to the City) or when Citizens signs the Decree, whichever is the later date. These covenants extend only to Citizens and do not extend to any other entity.

7. Intervenors' Release from Liability and Covenant Not to Sue the City. Except as specifically provided in this Consent Decree, including but not limited to the rights reserved in Paragraph 8 of this Decree, and in consideration of the actions that will be performed by the City

under the terms of this Decree, the Intervenors covenant not to sue or to take administrative actions against the City for, and the City shall be released from, any and all claims arising under 38 M.R.S.A. §§ 1304(12), 1318-A, 1319-J, 1361 - 1371, §§ 106 and 107 of CERCLA, 42 U.S.C. §§ 9606, 9607, §§ 7002 and 7003 of RCRA, 42 U.S.C. §§ 6972, 6973 or pursuant to any State law authorities (i) for any matter relating to Existing Contamination at the Site and the work covered by this Decree; and (ii) for recovery of all past and future Response and Oversight Costs, and any and all other costs incurred by Intervenors.

8. Reservation of Rights. The covenants not to sue set forth in the preceding paragraphs do not pertain to any matters other than those expressly specified therein.

A. DEP's Reservation as to Natural Resource Damage. DEP reserves, and this Consent Decree is without prejudice to, all rights of the DEP against the City, but not Citizens, for Natural Resource Damage.

B. DEP's General Reservation of Rights. DEP reserves the right to institute proceedings in this action to modify this Decree to compel the City or its successors, but not Citizens, (i) to perform further response actions relating to the Site or (ii) to reimburse DEP for additional Response and Oversight Costs if:

(1) conditions at the Site previously unknown to DEP are discovered, or
(2) information, previously unknown to DEP, is received which, in whole or in part, together with any other relevant information, indicates that the Remedial Action contained herein is not protective of the public health or the environment.

DEP also reserves the right to institute proceedings in this action to modify this Decree to compel the City or its successors, but not Citizens, (i) to perform further response actions relating to the Site or (ii) to reimburse DEP for additional Response and Oversight Costs if the

Remedial Action fails to attain or maintain the Remedial Action Objectives defined above and set forth in Appendix A.

In the event that DEP determines that the City has failed to implement the Remedial Action or perform any of the other obligations contained in this Decree in an adequate or timely manner, DEP may perform any and all portions of the Remedial Action DEP determines necessary. The City may invoke the procedures set forth in Paragraph 34 to dispute DEP's determination that the City has failed to implement the Remedial Action or other actions in an adequate or timely manner. Costs incurred by DEP in performing the Remedial Action pursuant to this paragraph shall be considered Response and Oversight Costs recoverable from the City, but not from Citizens.

The covenants not to sue set forth above do not apply as to any Settling Party related to any claims arising from criminal conduct by such party. In addition, the covenant not to sue the City set forth above is without prejudice to all rights against the City with respect to all other matters, including, but not limited to:

- (1) claims based upon a failure by the City to meet the requirements of this Consent Decree;
- (2) any liability resulting from exacerbation by the City, its agents, employees, successors or assignees of Existing Contamination;
- (3) any liability resulting from the release or threat of release of Hazardous Substances, pollutants, or contaminants at the Site after the Effective Date of this Decree, not within the definition of Existing Contamination; and
- (4) liability for violations of local, state and federal law and regulations.

Nothing in this Consent Decree is intended as a release or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the State may have against any person, firm, corporation or other entity not a party to this Decree.

C. Waivers and Reservations by the City and Citizens. Except as expressly set forth in this Decree, the City and Citizens expressly waive any and all claims they may have against the Intervenors with respect to any matter relating to Existing Contamination at the Site and the work covered by this Decree, but they reserve all rights and defenses that each or either of them may have in law or in equity for any claims or causes of action against any non-party to this Decree. Any claims not expressly waived by the City or Citizens shall be deemed reserved.

9. Contribution Protection. Upon the Effective Date of this Decree, Citizens and the City are entitled to protection from all contribution actions or claims for the matters addressed in this Decree, such that, to the extent provided by 42 U.S.C. §§ 9613 and 9622 and 38 M.R.S.A. § 348(4), neither the City nor Citizens shall be liable for claims for contribution brought by any party, or for any claims whatsoever brought by any other potentially responsible party. In addition, Citizens and the City reserve all rights they may have under applicable law to seek contribution under CERCLA Section 113(f)(3), 42 U.S.C. 9613(f)(3), in connection with the Site from any person, firm, corporation or other entity not a party to this Decree including, but not limited to costs of the Remedial Investigation and Feasibility Studies, the Remedial Action, and future Response and Oversight Costs under this Consent Decree and for all or part of the sums reimbursed to the State hereunder. Intervenors further agree to execute documents necessary to complete settlement of claims; and, as permitted by law, to grant protection from all contribution

actions or claims related to the Site (including without limitation actions or claims by the State) to appropriate parties at the request of Citizens.

V. RESPONSIBILITIES OF CITIZENS AND OBLIGATIONS OF THE CITY

10. Payment by Citizens and the City's Obligations and Covenants to Citizens.

A. Payment by Citizens to the City. Under the separate settlement agreement between the City and Citizens, Citizens has agreed to make certain payments to the City for the costs of (i) the Remedial Action; (ii) long-term operation and maintenance (iii) the State's Response and Oversight Costs; and (iv) other costs associated with the Site including Natural Resource Damage and the City's administrative costs. In consideration of these payments, the City has, among other things, assumed any and all liabilities of Citizens related to the Site.

B. Assumption of Responsibility by the City. Under the terms of this Consent Decree the City will assume sole responsibility for performing Remedial Action at the Site, including sole responsibility for providing for long-term operation and maintenance of the remedy and implementing institutional controls, provided this assumption of sole responsibility by the City shall in no way relieve any person or entity not party to this Consent Decree from liability, or prevent the City or its assignees from pursuing claims against those parties relating to the Existing Contamination. This Remedial Action, institutional controls, and long-term operation and maintenance will be performed under the supervision of DEP, and according to specific terms and conditions as more specifically set forth in this Decree.

C. Dismissal of Action. In consideration of the payment to be made and the obligations and agreements undertaken in the separate settlement agreement by and between the City and Citizens, the Settling Parties hereby Dismiss their claims against each other with prejudice. Each of the Settling Parties has further covenanted and agreed not to sue the other, in

any court or tribunal or to bring or make any claim, demand, action, lawsuit, cause of action (whether by direct action, counterclaim, cross claim, third party demand, intervention or other mode of action or proceeding) against the other based upon any matter directly or indirectly related to any claim released, transferred or assumed pursuant to the terms and provisions of this Decree.

D. Priority of Settlement Agreement Between the City and Citizens. The terms of the settlement agreement by and between the City and Citizens set out with particularity the obligations and covenants between the Settling Parties, and the terms of that separate settlement agreement shall take priority over any language in this paragraph concerning those obligations and covenants.

VI. RELIEF: THE CITY'S RESPONSIBILITIES

11. Selection of Remedies.

A. Pre-Design Studies. Within sixty (60) days of the Effective Date, the City shall submit to DEP, for review and approval, a work plan including schedules for conducting Pre-Design Studies which shall include the studies described in Appendix D of the Feasibility Study as well as such other studies as the City reasonably believes will optimize the design and construction of the remedy. The City shall complete these studies no later than eight (8) months from DEP's approval of the Pre-Design Studies work plan.

B. Reports of Pre-Design Studies. The City shall submit to DEP written reports detailing the results of each pre-design study within a reasonable time after each study is completed. In addition, the City shall submit a Final Report summarizing the results of all the pre-design studies and the effect of those studies on the Selected Remedies no later than sixty (60) days following completion of the last study contemplated by Paragraph 11.A.

C. Notice of Implementation of Selected Remedies. If, following the Pre-Design Studies, the City decides to implement the Selected Remedies it shall notify the Department of this decision in the Final Report described in Subparagraph 11.B of this Consent Decree and, upon the Department's approval of the Final Report, shall proceed to implement the Selected Remedies as provided further in this Consent Decree.

D. Submission of Draft Explanation of Significant Differences. If, as a result of the Pre-Design Studies, the City decides to propose to modify one or more of the Selected Remedies, the City, within forty-five (45) days after submitting the Final Report described in Subparagraph 11.B of this Consent Decree shall submit, for review and approval, a draft Explanation of Significant Differences ("ESD Report") to the Department setting forth any proposed modifications to the Selected Remedies. The ESD Report will: (1) explain the differences between the Selected Remedies and the proposed modified remedies (2) explain the basis and rationale for the proposed modified remedies and (3) provide an explanation of how the proposed modified remedies will attain and maintain the RAOs and all other applicable laws. If the Department determines that the City is proposing a fundamental change to the Selected Remedies, the Department shall provide public notice of the ESD Report and establish a period for receiving comments on the ESD Report from the public and interested parties, and will review the ESD Report as provided in Paragraph 20 of this Consent Decree. If the DEP determines based upon this process that it will accept the modified remedial alternatives then DEP will issue an Explanation of Significant Differences and will notify the City to implement the modified Selected Remedies as provided in this Consent Decree.

12. Submission of Remedial Action Plan.

Within One Hundred and Eighty (180) days of DEP's approval of the Final Report or the DEP's issuance of an Explanation of Significant Differences, the City shall submit to DEP, for review and approval, a Remedial Action Plan ("RAP") including preliminary (30%) design plans and specifications as well as supporting documents and proposed institutional controls. Upon approval of the RAP, the Department may modify the scope of the RAP at any time during implementation of remedial activities if the DEP discovers information previously unknown to DEP that indicates that the Remedial Action will not attain or maintain the Remedial Action Objectives or is otherwise not protective of public health or the environment.

13. Submission of Project Operations Plan. Within sixty (60) days of the DEP's approval of the RAP, the City shall submit to DEP, for review and approval, a Project Operations Plan acceptable to the DEP. The Project Operations Plan ("POP") shall include, but not necessarily be limited to, final design plans and specifications and a final design report as well as a Project Schedule, a Site Management Plan, a Sampling and Analysis Plan including a Field Sampling Plan and a Quality Assurance Project Plan, a Health and Safety Plan, an Operations and Maintenance Plan, a Data Management Plan, and a Community Relations Plan.

14. Notification of Field Activities. Upon receipt of the DEP's written approval of the POP, the City shall commence implementation of the Remedial Action in accordance with the approved POP and the City shall continue to implement the POP in accordance with the schedule therein. The City shall notify the DEP verbally and in writing at least 14 calendar days prior to the initiation of any field activities, and will also identify and provide information regarding the qualifications of all contractors and subcontractors who will be implementing the Remedial Action.

15. Progress Reports and Meetings. The City will meet periodically with the DEP to keep DEP staff apprised of the general status of the Remedial Action. In addition, while construction of the remedial components is being carried on at the Site, the City shall provide to the DEP on a weekly, or on an otherwise mutually agreed upon periodic, basis a written progress report for each preceding period. These reports shall be submitted within five (5) days of the end of each agreed upon period. Following the completion of construction of the remedial components at the Site, but during operation and maintenance and long term monitoring, reports shall be provided quarterly, or on an otherwise mutually agreed upon periodic basis. Quarterly reports should be submitted at the end of each quarterly period which shall be considered to be January 30, April 30, July 30 and October 30 of each calendar year. These reports shall be submitted within thirty (30) days of the end of each quarter. If and when DEP agrees to accept annual reports, these reports shall be submitted at the end of each calendar year. The DEP reserves the right to require additional information or detail as it deems necessary and appropriate. At a minimum, these progress reports shall describe in detail the actions that have been taken toward achieving compliance with this Consent Decree during the past period; include a description of all results of sampling and tests received by the City during the past period; include a description of all plans and procedures completed or partially completed during the past period; and describe actions, data gathering activities and plans which are scheduled for the next period. For purposes of this paragraph, reports submitted by electronic mail shall be considered to be written reports.

16. Submission of Remedial Action Report. Upon completion of the Remedial Action, the City shall submit a Remedial Action Report (“RA Report”) describing project activities including but not limited to all remedial actions together with documentation

including: analytical sampling data; field observations; project QA/QC documentation; and figures, plans and tables describing Site conditions.

17. Post Closure Care Activities. The City shall implement and continue post closure care activities appropriate to the Remedial Action, including long-term monitoring and maintenance and institutional controls as approved by the DEP.

18. Other Requirements. The City shall exercise due care at the Site with respect to the Existing Contamination and shall comply with all applicable local, state, and federal laws and regulations. The City agrees to cooperate fully with DEP in the implementation of approved response actions at the Site and further agrees not to interfere with DEP's oversight activities. DEP agrees, consistent with its responsibilities under applicable law, to provide reasonable notice and to use reasonable efforts to minimize any interference with the City's operations by such entry and oversight; in this regard the DEP acknowledges that the Site is adjacent to the City's waterfront. In the event the City becomes aware of any action or occurrence which causes or threatens a release of Hazardous Substances, pollutants or contaminants at or from the Site that constitutes an immediate threat to public health or welfare or the environment, the City shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release, and shall, in addition to complying with any applicable notification requirements under section 103 of CERCLA, 42 U.S.C. § 9603, 37-B M.R.S.A. § 798, or any other law, immediately notify DEP of such release or threatened release.

19. Additional Work.

A. DEP reserves the right to require work in addition to the implementation of Remedial Action work specified in Paragraphs 12 and 13 if necessary to protect the public health and the environment. By way of example and not of limitation, DEP may require additional work

if the Remedial Action fails at any time to attain and maintain the RAOs attached as Appendix

A. In the event that the DEP determines that additional work is necessary, DEP shall notify the City in writing.

B. The City shall, within sixty (60) days of receipt of notification, unless an alternative schedule is mutually agreed upon, submit a work plan to DEP, for review and approval, to cover the additional work. Upon approval of the work plan, the City shall implement the work plan in accordance with the approved schedule.

20. Submissions Requiring Agency Approval.

A. After review of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Decree, DEP shall: (i) approve, in whole or in part, the submission; (ii) approve the submission upon specified conditions; (iii) modify the submission to cure the deficiencies; (iv) disapprove, in whole or in part, the submission, directing that the City modify the submission; or (v) any combination of the above.

B. In the event of approval, approval upon conditions, or modification by DEP, pursuant to Subparagraph 20(A)(i), (ii), or (iii), the City shall proceed to take action required by the plan, report, or other item, as approved or modified by DEP.

C. Upon receipt of a notice of disapproval pursuant to Subparagraph 20(A)(iv) the City shall, within thirty (30) days or such other time as specified by DEP in such notice, correct the deficiencies and resubmit the plan, report, or other item to DEP, for review and approval. Notwithstanding the receipt of a notice of disapproval pursuant to Subparagraph 20(A)(iv), the City shall proceed, at the direction of DEP, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve the City of any liability for stipulated penalties under Paragraph 33 (Stipulated Penalties)

with respect to the deficient portion.

D. All plans, reports, and other items required to be submitted to DEP under this Consent Decree shall, upon approval or modification by DEP, be enforceable under this Consent Decree. In the event DEP approves, conditions or modifies a portion of a plan, report, or other item required to be submitted to DEP under this Consent Decree, the approved, conditioned or modified portion shall be enforceable under this Consent Decree.

21. Settlement of Response and Oversight Costs.

A. Within 30 days after the Effective Date of this Consent Decree the City shall make a lump sum monetary payment in the amount of \$334,886.00 as settlement of past Response and Oversight Costs through December 31, 2006. The payment shall be either in the form of a certified check made payable to the Maine Uncontrolled Sites Fund or some other form acceptable to DEP. Payment shall be forwarded to:

Henry Aho, Acting Division Director
Maine Department of Environmental Protection
Bureau of Remediation & Waste Management
Division of Remediation
17 State House Station
Augusta, Maine 04333-0017

B. The City shall also reimburse the DEP through the Maine Uncontrolled Sites Fund for any future Response and Oversight Costs that will be incurred by the DEP after December 31, 2006 including, but not limited to, the Department's costs of overseeing the City's implementation of this Consent Decree. At least annually, on or before June 1 of each year after the entry of this Decree, DEP shall submit to the City an itemized statement of Response and Oversight Costs, along with the summaries supporting such costs incurred by the State of Maine. On or before June 1 of each year that DEP has submitted a statement of Response and Oversight Costs, along with the summaries supporting such costs, or within 30 days of the City's receipt of

the itemized statement if after May 1, the City shall submit a check for the amount of those outstanding costs or engage in dispute resolution pursuant to Paragraph 34. Checks reimbursing DEP costs shall be made payable to the Maine Uncontrolled Sites Fund and forwarded to the address listed in Subparagraph 21A.

VII. ADDITIONAL AGREEMENTS BY THE PARTIES

22. Contractors. All work performed by the City pursuant to this Consent Decree shall be performed under the direction and supervision of an environmental consultant that has obtained the prior approval of DEP. All subcontractors to the approved environmental consultant shall be Maine certified geologists or Professional Engineers or otherwise be appropriately qualified in light of the scope of the subcontracted services in question. The City may designate new contractors or other new persons performing work under this Consent Decree so long as DEP approves such contractors or persons. The City shall provide prior written notice to the DEP of the identity and qualifications of any contractors who will carry out the terms of this Consent Decree.

23. Disclosure to Contractors. The City shall disclose the existence of this Consent Decree to all contractors, analytical laboratories, and consultants retained to conduct any portion of the work performed pursuant to this Consent Decree and provide a copy of this Consent Decree to any project contractor or subcontractor that requests it.

24. Delay in Performance and *Force Majeure*. The Parties agree that the timely completion of the work required by this Consent Decree is important. The City shall use its best efforts and shall undertake all reasonable measures to ensure that the requirements set forth in this Consent Decree, including time requirements, are met. All deadlines for action by the City established by the Consent Decree shall be reasonably extended as a result of any delays

resulting from acts of God or war, failure of governmental authorities to issue required permits (where a properly completed application has been submitted to the governmental authority), labor strikes, or other conditions beyond the control of the City or its contractors (hereinafter, “*Force Majeure*”). The City shall notify the DEP electronically or telephonically as soon as the City becomes aware that circumstances constituting *Force Majeure* have occurred or are likely to occur, and thereafter the City shall promptly notify DEP in writing in accordance with Paragraph 38 (Notice). Such written notice shall be accompanied by all available documentation, including but not limited to third-party correspondence, a description of the circumstances, the City’s rationale for interpreting the circumstances as being *Force Majeure*, and the date by which or the time period within which the City proposes to complete the delayed activities. The City’s failure to provide notice as described in this paragraph shall constitute waiver of the City’s right to seek a delay in performance on the basis of an event of *Force Majeure*.

25. Assumption of Risk. For purposes of this Consent Decree, the City shall assume any and all liability arising from or relating to its acts or omissions, including the acts and omissions of its contractors and subcontractors, in the performance of the Remedial Action set forth herein or their failure to perform fully or to complete the requirements of this Consent Decree; provided, however, that nothing herein contained shall be deemed a waiver of the City’s immunities or defenses under the Maine Tort Claims Act or of the City’s right to pursue contribution or indemnification claims against its contractors or subcontractors.

26. Permits/Leases. The City or its contractor(s) shall obtain as the Permittee all necessary local, state and federal permits, if any, for implementation of the actions required in this Consent Decree and shall obtain any necessary leases or other approvals required to conduct

Remedial Action on lands submerged beneath the Penobscot River. All permits, licenses, and approvals shall be issued in the name of the City and all waste generated at the Site shall designate the City (or an affiliate or contractor of the City) as the generator of such waste on the appropriate manifest or bill of lading. The City will use best efforts to assure that all permits necessary for completion of the activities required by this Consent Decree are applied for in a timely fashion. The City shall notify the DEP within ten (10) working days of the written denial of the City's application for such permit or permits or lease.

27. Payments or Expenditures. No payments or expenditures made in accordance with this Consent Decree, other than payments pursuant to Paragraph 33 (Stipulated Penalties), shall be deemed the payment of a penalty or monetary sanction.

28. Access/Institutional Controls. DEP shall have the right to enter, at all reasonable times, the Site and any other property to the extent access to the property is controlled by the City for the purposes of, *inter alia*, monitoring the Remedial Action, verifying, inspecting and copying records, documents, operating logs, contracts, and other documents related to this Consent Decree, conducting tests or sampling, and carrying out the terms of this Consent Decree. To the extent that the Site or any other property to which access is required for the implementation of this Consent Decree or the implementation of institutional controls is owned or controlled by persons other than the City, the City shall use its best efforts to secure access or other property rights from such persons for the City, as well as for the DEP and its representatives, including post closure care activities, or the implementation of institutional controls

29. Document Preservation. The City agrees to preserve, for a minimum of ten (10) years after DEP's Certification of Completion of Construction pursuant to Paragraph 40, all

records and documents in its possession or in the possession of its divisions or employees relating to the activities undertaken pursuant to this Consent Decree, despite any document retention policy to the contrary. Nothing in this Consent Decree shall constitute any waiver of privilege that may otherwise attach to any such records or documents.

30. Other Claims. Nothing herein releases or is intended to release any claims, causes of action or demands in law or equity of the Intervenors, the City or Citizens, against any person, firm, partnership, entity or corporation that is not a signatory to this Consent Decree for any liability that may arise or may have arisen out of or relating in any way to the generation, storage, treatment, handling, transportation, or disposal of any materials, wastes or hazardous substances at, to, or from the Site.

31. Creation of Imminent Threat. In the event that the DEP determines that activities which are taking place at the Site are in noncompliance with this Decree, or even if in compliance, create an imminent threat to the environment or to the health or safety of the people on the Site or in the surrounding area, or in the event that such imminent threat arises from any other circumstances encountered during the implementation of this Consent Decree, DEP may direct the City to stop further implementation of this Consent Decree for such period of time as needed to abate the danger. DEP may issue such a stop work order regardless of whether the endangering activity or circumstances are in compliance with this Consent Decree or caused by circumstances not expected or contemplated in this Consent Decree. During the period of time that the DEP orders the City to stop implementation of this Consent Decree, the City's obligations pursuant to this Consent Decree shall be suspended and, in the event that such a delay was not caused by the negligent or noncompliant acts or omissions of the City, the time

schedule for implementation shall be extended until the Decree is modified or revoked to allow further implementation.

32. Other Laws. All actions taken pursuant to this Consent Decree shall be undertaken by the City in accordance with the requirements of all applicable local, state and federal laws and regulations and applicable state and federal environmental and public health standards and guidelines.

33. Stipulated Penalties.

A. The City shall be liable to the State of Maine for stipulated penalties in the amounts set forth in the following paragraph for failure to comply with the applicable requirements of this Consent Decree. "Compliance" includes completion of the activities under this Consent Decree or any implementation schedule, work plan, or other plan approved under the Consent Decree in accordance with all applicable requirements of law, this Consent Decree, and any plans or other documents approved by DEP pursuant to this Consent Decree and within the specified time schedules established by and approved under this Consent Decree.

B. The following stipulated penalties shall be payable by the City per violation per day to the State of Maine for any noncompliance:

<u>Period of Noncompliance</u>	<u>Penalty/Violation/Day</u>
1st through 14th day	\$250.00
15th through 30th day	\$750.00
31st day and beyond	\$1,500.00

C. All penalties shall begin to accrue on the day after the complete performance is due under this Decree or the day the violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. Nothing herein

shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree.

D. Following DEP's determination that the City has failed to comply with a requirement of this Consent Decree, DEP shall give the City written notification of the same and describe the noncompliance ("Notice of Noncompliance").

E. Except for those matters submitted to Dispute Resolution under Paragraph 34 all penalties owed to the State of Maine under this section shall be due and payable within 30 days of the City's receipt from DEP of a demand for payment of the penalties. All payments under this section shall be paid by certified check made payable to the "Uncontrolled Sites Fund" and shall be mailed to the address listed in Paragraph 38 (Notice).

F. The payment of penalties shall not alter in any way the City's obligation to complete the performance of the action required under this Consent Decree.

G. If the City fails to pay stipulated penalties when due, the DEP may institute proceedings against the City to collect the penalties, as well as interest. Interest shall be paid on the unpaid balance, which shall begin to accrue on the date of the Department's Notice of Noncompliance.

H. Nothing in this Consent Decree shall be construed as prohibiting, altering, or in any way limiting the ability of the DEP to seek from the City any other remedies or sanctions available by virtue of the City's violation of this Decree or of the statutes and regulations upon which it is based.

34. Dispute Resolution. Any dispute arising under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between DEP and the City for a period of up to fifteen (15) working days from the time notice of the existence of the

dispute is given by the City to DEP. Further negotiations may be extended by agreement of the parties to the dispute. In the event the parties are unable to resolve the dispute informally, DEP shall issue a written decision which describes the nature of the dispute and DEP's response. This written decision shall be served as specified in Paragraph 38 of this Decree. Disputes concerning DEP's approval of any requirement of or relating to the Remedial Action or the amount of Response and Oversight Costs which the City owes DEP under this Decree, and only these types of disputes, may be elevated by the City if the City files a written appeal with the Commissioner within 15 days from the date DEP issues its written decision. The Commissioner's decision, which shall be consistent with applicable federal and state law, including CERCLA, RCRA, the NCP and the Maine Uncontrolled Sites Law, shall be final unless the City makes application to this Court, pursuant to its continuing jurisdiction, within ten (10) working days from the date the City receives the Commissioner's written decision. The City shall have the burden of proof when seeking judicial review by this Court of any decision of the Commissioner and the Commissioner's decision shall be accorded a presumption of regularity. To the maximum extent practicable the scope of review, standard of review and procedures for judicial review of the Commissioner's decision shall be those set forth in the Maine Administrative Procedure Act, 5 M.R.S.A. §§ 11001 et seq., for review of final agency actions. The time period for the accumulation of any Stipulated Penalties under Paragraph 33 that are related to a matter under dispute shall be tolled during the pendency of any Dispute Resolution proceedings brought in good faith by the City under this Paragraph 34.

35. Hold Harmless Agreement. Neither the DEP nor Citizens shall be liable for any injuries or damage to persons or property resulting from acts or omissions of the City in carrying out activities pursuant to this Consent Decree. The DEP shall not be held to be a party to any

contract entered into by the City in carrying out the activities pursuant to this Consent Decree.

The City agrees to indemnify and save and hold harmless the DEP and Citizens, and their respective agents and employees, from any and all claims or causes of action against the DEP or Citizens arising from or on account of acts or omissions of the City, its officers, employees, agents, or contractors in carrying out the activities pursuant to this Consent Decree, provided that the City shall not owe the DEP any such obligation in the event of a citizen's suit to enforce any environmental law, regulation, or common law duty, or in the event that DEP has been negligent, within the meaning of 14 M.R.S.A. §§ 8101 *et seq.*

36. Insurance and Indemnification.

A. Within thirty (30) days of implementation of the Remedial Action, the City shall obtain or require its contractor(s) and subcontractors to obtain a policy or policies of insurance providing at least the following coverages in connection with the activities performed at the Site by the City or its employees, agents, contractors or subcontractors under this Decree:

(1) Comprehensive General Liability Insurance, including Contractors Protective Coverage, in an amount of not less than \$1,000,000.00 per occurrence, combined single limit, general aggregate, \$2,000,000.00;

(2) Automobile Liability Insurance in an amount of not less than \$ 1,000,000.00 per occurrence;

(3) Workers' Compensation Insurance adequate to meet the statutory requirements of all jurisdictions having authority over such claims, including but not limited to the State of Maine, and Employer's Liability Insurance in an amount of not less than \$1,000,000.00 per occurrence;

(4) Professional Liability Insurance and Contractor's Pollution Liability Insurance as necessary and in commercially reasonable amounts.

The Intervenors shall be named as additional insureds in the policy or policies required under subsections 1, 2 and 3, above. The City shall maintain such insurance or require its contractor(s) to maintain such insurance in force until the Department issues a certificate of completion for all on-site construction of Remedial Action activities include post-construction monitoring.

B. Before starting any on-site work, and annually thereafter, the City shall submit to the DEP certification of coverages maintained in compliance with this Section. In addition, the City shall furnish the Department with copies of those policies purchased specifically for activities undertaken pursuant to this Decree.

C. Anything herein notwithstanding, in no event is the City relieved of its obligation to implement in a timely fashion the remedial design work and Remedial Action under this Decree by reason of any inability to obtain, or failure to maintain in force any insurance policies required in this Section, any insurance required by this paragraph, or by reason of any dispute between the City and any of its insurers concerning any claim arising out of the design, construction, implementation or operation of the remedy, or arising out of any other activity required under this Decree.

37. Designation of Coordinators. Within fifteen (15) working days of the Effective Date of this Consent Decree, the City shall designate a coordinator who shall administer all actions called for by this Consent Decree and the City shall submit the coordinator's name and address to the DEP. The DEP shall, during the same time period, designate a coordinator for administration of its responsibilities and shall submit the coordinator's name and address to the

City. Different coordinators may be designated by any of the Parties provided that notice of such designation is made to the other Parties in accordance with Paragraph 38 within ten (10) working days of the designation.

38. Notice. All notices required pursuant to this Consent Decree shall be deemed to have been made (i) three (3) days from the mailing of a certified letter, return receipt requested, or (ii) one (1) day after sending by receipted express delivery to the following persons. Different recipients may be designated by any of the Parties provided that notice of such designation is made to other Parties in the manner provided in this paragraph.

For DEP:

Henry Aho, Acting Division Director
Bureau of Remediation & Waste Management
Division of Remediation
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

Kathy Howatt, Project Manager, Uncontrolled Sites Program
Bureau of Remediation & Waste Management
Division of Remediation
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

For the City:

Jim Ring, City Engineer
City of Bangor
73 Harlow Street
Bangor, Maine 04401

Norman Heitmann, City Solicitor
City of Bangor
73 Harlow Street
Bangor, Maine 04401

For Citizens:

Hilary E. Glassman
Citizens Communications Company
3 High Ridge Park
Stamford, CT 06905

39. Subsequent Modification and Incorporation. This Court shall retain jurisdiction for the purpose of enabling any Party to this Consent Decree to apply to this Court at any time for such modifications of this Decree as may be necessary, for enforcement of any terms of this Decree, or for any other action necessary or appropriate to effectuate the implementation of the Remedial Action and long-term operation and maintenance required by this Decree. Any material modifications of this Consent Decree must be in writing. The Parties recognize, however, that extension of the deadlines set forth herein may be necessary from time to time. The Parties agree to negotiate in good faith over such extensions. Extension of any deadline hereunder shall not be considered a modification of the Consent Decree requiring Court approval but must be in writing.

40. Certification of Completion of Construction. At the completion of the construction of the remedial components, the City shall notify the DEP. Within a reasonable period following such notice, the DEP shall assess the remedial components that have been constructed. If the Department determines that the construction of the remedial components has been completed pursuant to the RAP, DEP shall provide a certificate of completion of construction. Issuance of a certificate of completion of construction pursuant to this paragraph shall not constitute satisfaction of all of the City's obligations under this Decree and this Decree shall remain in full force and effect until the City completes all obligations under this Decree.

41. Separate Documents. This Consent Decree may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

42. Lodging and Opportunity for Public Comment.

The Parties hereby request the Court to lodge this Consent Decree for a period of thirty (30) days to receive public comment. The Intervenors have posted public notice requesting that any comments on this Consent Decree be filed with Intervenors within this 30-day comment period, and Intervenors will provide any such comments to the Court in a form prescribed by the Court.

43. Termination.

The Parties' agreement underlying this Consent Decree is premised upon the Court's approval of all material terms. In the event that the Court has not, on or before June 15, 2007, entered this Consent Decree substantially in the form lodged with the Court, the underlying agreement embodied herein shall terminate and be of no further force and effect. Provided that this Decree is approved by the Court, on or before June 15, 2007, substantially in the form lodged with the Court, the Parties expressly waive any rights they may have to appeal entry of this Decree.

Dated and entered this 5th day of June, 2007.

/s/ George Z. Singal,
Chief U.S. District Judge

CONSENTED TO:

For Intervenors State of Maine and Maine Department of Environmental Protection:

Date: 04/11/2007

/s/ Mary M. Sauer

Mary M. Sauer, Esq.
Assistant Attorney General
Office of the Attorney General
6 State House Station
Augusta, Maine 04333-0006
207-626-8579

For Citizens:

Date: 04/11/2007

/s/ Martha C. Gaythwaite

Martha C. Gaythwaite, Esq.
Friedman Gaythwaite Wolf & Leavitt
Six City Center
P.O. Box 4726
Portland, Maine 04112-4726
207-761-0900

For the City:

Date: 04/11/2007

/s/ William B. Devoe

William B. Devoe, Esq.
Eaton Peabody
Fleet Center - 80 Exchange Street
P.O. Box 1210
Bangor, Maine 04402-1210
207-947-0111

APPENDIX A

Table 4 taken from RMT's *Remedial Action Objectives for Penobscot River Sediment and Surface Water, City of Bangor – Bangor Landing, Maine* (2005) summarizing the Remedial Action Objectives

Table 4
Remedial Action Objectives and Remedial Goal Options for Penobscot River Sediment and Surface Water

AREA OF TAR DEPOSIT	DESCRIPTION	RATIONALE FOR REMEDIAL GOAL DEVELOPMENT	REMEDIAL ACTION OBJECTIVES	REMEDIAL GOAL OPTIONS
<i>Sediment</i>				
Active Zone	<ul style="list-style-type: none"> ■ Area of observed gas generation and tar migration ■ High concentration of PAHs and abundant tar in sediment ■ Water depths at low tide < 20 feet ■ Relatively unweathered tar ■ Tar Deposit largely continuous except at edges 	<ul style="list-style-type: none"> ■ Tar migrates from Tar Deposit to river surface and poses unacceptable human health risk. ■ Tarry sediment in areas with minimum water depth < 5 feet poses unacceptable human health risk based on direct exposure. Tarry sediment clinging to boat anchors could also cause an unacceptable risk. ■ Tarry sediment with total PAH concentrations > 44 mg/kg has adverse effect on survival and > 39 mg/kg has adverse effect on growth of <i>Hyallela azteca</i>. 	<ul style="list-style-type: none"> ■ Prevent the ongoing migration of tar blebs to the river surface and the formation of sheens at the river surface. ■ Prevent human exposure to tarry sediment <i>in situ</i>. ■ Prevent exposure of benthos to tarry sediment <i>in situ</i>. ■ Minimize leaching and erosion of PAHs from the Tar Deposit to river water. 	<ul style="list-style-type: none"> ■ Prevent human and ecological exposure to sediment containing total PAH concentration exceeding 32 mg/kg.

Table 4
Remedial Action Objectives and Remedial Goal Options for Penobscot River Sediment and Surface Water

AREA OF TAR DEPOSIT	DESCRIPTION	RATIONALE FOR REMEDIAL GOAL DEVELOPMENT	REMEDIAL ACTION OBJECTIVES	REMEDIAL GOAL OPTIONS
Inactive Zone	<ul style="list-style-type: none"> ■ High concentration of PAHs and abundant tar in sediment ■ Minimum water depths typically > 20 feet at low tide ■ Weathered tar ■ Tar Deposit largely continuous except at edges, and exposed over broad portion of riverbed ■ Tar not observed in shallow sediment at several locations in Inactive Zone ■ Hardened tar layer or weathered tar present over much of the Inactive Zone 	<ul style="list-style-type: none"> ■ Tarry sediment with total PAH concentrations > 44 mg/kg has adverse effect on survival and > 39 mg/kg has adverse effect on growth of <i>Hyalella azteca</i>. 	<ul style="list-style-type: none"> ■ Prevent exposure of benthos to tarry sediment <i>in situ</i>. ■ Improve the biological function of the substrate of the Inactive Zone by the addition of materials for the purpose of promoting the accretion of sediments. 	<ul style="list-style-type: none"> ■ Stop ecological exposure to tar containing PAHs that, based on their bioavailability, may have an adverse effect on the benthos.

Table 4 (continued)
Remedial Action Objectives and Remedial Goal Options for Penobscot River Sediment and Surface Water

AREA OF TAR DEPOSIT	DESCRIPTION	RATIONALE FOR REMEDIAL GOAL DEVELOPMENT	REMEDIAL ACTION OBJECTIVES	REMEDIAL GOAL OPTIONS
<i>Surface Water Over Tar Deposit (includes all of Dunnett's Cove)</i>				
Water column over entire Tar Deposit	<ul style="list-style-type: none"> ■ PAHs are present at detectable concentrations in shallow (1 ft below surface) and deep (1 ft above riverbed) in surface water. 	<ul style="list-style-type: none"> ■ Concentrations of PAHs in surface water pose unacceptable human health risk. ■ PAHs in surface water are thought to be associated with the Active Zone of the Tar Deposit. ■ Weathered tarry sediment in the Inactive Zone is not likely to yield measurable concentrations of PAHs in surface water. 	<ul style="list-style-type: none"> ■ Minimize potential human exposure to PAHs leaching to surface water from the Tar Deposit 	<ul style="list-style-type: none"> ■ Same as RAO
Sheens and tar blebs on river surface	<ul style="list-style-type: none"> ■ Sheens have very high PAH concentrations; they float with tar blebs to the river surface from the Active Zone of the Tar Deposit, and migrate with river currents. 	<ul style="list-style-type: none"> ■ Concentrations of PAHs in sheens and tar blebs pose unacceptable human health risk. 	<ul style="list-style-type: none"> ■ Prevent human exposure to tar blebs and sheens. 	<ul style="list-style-type: none"> ■ Same as RAO